

REMARKS

In the Office Action, the Examiner rejected claim 1 under 35 USC §102(e), and rejected claims 2-5 and 23-33 under 35 USC §102(e) and/or §103(a). These rejections are fully traversed below.

Claim 33 has been cancelled without prejudice or disclaimer. New claim 34 has been added to the application. Claims 1-5, 22-32 and 34 are now pending. Reconsideration of the application is respectfully requested based on the following remarks.

PATENTABILITY OF CLAIMED INVENTION

In the Office Action, the Examiner rejected claim 1 under 35 USC §102(e) as being anticipated by Kessner (U.S. Patent 6,754,701) and as being anticipated by Weinberg et al. (U.S. Patent 5,974,572); and rejected claims 2-5 under 35 USC §102(e) as being anticipated by Weinberg et al. and/or §103(a) as being obvious over Weinberg et al. in view of Nesbitt et al. (U.S. Patent 6,418,544). Applicants respectfully disagree with these rejections.

Kessner describes a load testing system for testing a web site or other type of server system. The load test system uses a thread architecture that reduces the computing resources needed to generate a desired load. The system uses a plurality of virtual users to simulate user interactions with a web site. Further, col. 3, lines 43-57 state:

The load testing system 100 uses a virtual user component 102, or "Vuser," that simulates a client program's interaction with a web site 120 during a user browsing session. Each Vuser 102 sends requests to the web site 120 according to a pre-defined test script (Vuser script) 108. The script 108, which may be different for different Vusers, may be in the form of a list of the hypertext transfer protocol (HTTP) requests to be sent to the web server. The script may also specify the content of expected server responses. The script may be read from a script file by the Vuser during execution, or may be compiled within the executable Vuser code. Each request may also be a secure HTTP or HTTPS request, a file transfer protocol (FTP) request, or any type of request that may be handled by a server.

Accordingly, Kessner teaches simulating a load on a web site through use of a plurality of Vusers which simulate client program interaction with a web site. The Vusers follow a script of HTTP requests. Kessner even contrasts its scripts to web browsers stating:

Under actual, **non-test conditions**, each client computer 104 typically only executes **one web browser at a time**. In other words, only one person can typically browse the web on one computer at a time. In a **test configuration**, however, there is little or no advantage to executing only one Vuser 102 on each computer 104 -- indeed this would be an inefficient use of resources. ...A load testing system 100, therefore, typically **runs multiple Vusers** on each client computer 104 to create the desired load.

Kessner, col. 4, lines 22-34 [emphasis added].

In sharp contrast to Kessner's use of Vusers, the claimed invention generates a load on a web site using real web browsers. Kessner teaches against use of a web browser and touts its Vusers. However, according to the present invention, testing of a website can be provided, and elegantly so, through use of multiple web browsers operating on a computer.

Further, as to claim 1, a network browser application has built-in capabilities for performing analysis and testing of websites residing on the Internet. Kessner uses Vusers to simulate loading to a web site. These Vusers are explicitly not network browser applications. Nesbitt et al. is not able to overcome the above-noted deficiencies of Kessner. Weinberg et al., as discussed in more detail below, also uses scripts/Vusers that are not network browser applications.

Based on the foregoing, it is submitted that claim 1 is patentably distinct from Kessner. Thus, it is respectfully requested that the Examiner withdraw the rejections under 35 USC § 102(e).

Claim 2 pertains to a test-enabled web browser for operation on a computing device. Among other things, claim 2 recites:

wherein when said load testing component is activated, a number of multiple copies of said test-enabled web browser operate on a single client machine having its cache turned off, with each of the multiple copies of said test-enabled browser separately executing a playback script, and

wherein the load applied to the website server by the number of multiple copies of said test-enabled web browser is dependent on the number.

Hence, claim 2 uses multiple copies of a test-enabled browser to load test a website server.

In contrast, Weinberg et al. uses scripts, namely load testing scripts ("Web scripts"). Weinberg et al., col. 32, lines 26-29. "During the load testing process, Web scripts are sequentially played back or "run" by sequentially submitting the request messages to the site. This is preferably accomplished using a Vuser executable. As depicted in FIG. 25, multiple Vusers (i.e., multiple instances of the Vuser executable) can be run simultaneously on a single workstation, with different Vusers optionally running different Web scripts." Weinberg et al., col. 32, lines 48-54.

Still further, Weinberg et al. states:

As illustrated in FIG. 25, the Vusers communicate with and run under the control of the LoadRunner or SiteTest Controller 298 (both referred to herein simply as "the Controller"). As illustrated by the partial screen display of FIG. 26, the controller 298 includes a user interface that allows the user to selectively launch and monitor the Vusers." Weinberg et al., col. 32, lines 61-63.

Scripts are NOT browsers. Hence, the use of multiple instances of Vusers as described in Weinberg et al. completely fails to teach or suggest the use of multiple test-enabled browsers. Weinberg et al. also clearly distinguishes scripts from a standard Web browser. See, e.g., Weinberg et al., col. 32, lines 39-47. As noted above, these scripts run under the control of the LoadRunner or SiteTest Controller 298, which is not a web browser. See Weinberg et al., col. 32, lines 58-61. Indeed, the use of specialized scripts and a controller 298 actually would teach away from the use of multiple copies of a test-enabled browser as recited in claim 2. Weinberg et al., col. 2, lines 58-65 even admits that "...the test scripts [that drive the Vuser components] and scenarios by this method are not necessarily representative of the paths and browsing behaviors followed by typical users."

Weinberg et al. is also completely silent on turning off the cache of a browser during load testing. First, as previously noted, Weinberg et al. is using scripts not multiple copies of a browser to perform load testing. Second, nothing suggests that the scripts even have a cache available for their usage.

The Examiner relies on Nesbitt et al. to teach that a cache can be turned off during load testing. However, Nesbitt et al. is expressly making use of a cache during its testing. Col. 3, lines 65-67 state: "Another object of the present invention is to provide a technique whereby client-side caching is factored into Web server stress

testing.” The Examiner references col. 2, line 7 to col. 3, line 43 but also indicates that a cache is used. Hence, if anything, Nesbitt et al. is teaching away from the claim 2 which expressly turns off the cache.

Based on the foregoing, it is submitted that claim 2 is patentably distinct from Weinberg et al., alone or in combination with Nesbitt et al.

In addition, it is submitted that dependent claims 3-5 and 23-33 are also patentably distinct for at least the same reasons. However, several of these dependent claims are further discussed below.

Claim 3, for example, recites that the “test-enabled browser further comprises at least one of a script record component, a script playback component, a content validation component, a download timing monitor component, and a quality analysis component.” Similarly, claim 28 recites that the test-enabled browser comprises a script record component and a script playback component. Weinberg et al. does not use a test-enabled web browser as noted above. Even if it did, it would not include a script record component or a script playback components as recited in the Office Action. Although the Vusers can run test scripts in Weinberg et al., the Vusers are not part of a browser but expressly separate therefrom.

Claim 4 recites that the “standard browsing components comprises Dynamic Linked Library (DLL) components.” The Office Action references Figure. 11 of Weinberg et al.; however, Figure 11 clearly indicates that the Astra 94 is operating through a proxy to capture HTTP/S traffic. Clearly, Astra 94 is not the browser (which is shown as browser 170) but is a proxy or passive HTTP/S tap that is distinct from the browser 170.

Claim 26 recites that a Document Object Model (DOM) for the given web page is accessed. Weinberg et al. makes no mention of any use of a Document Object Model or how it might be analyzed in performing load testing.

Claim 29 recites that “the script playback component can adaptively playback the playback script.” Weinberg et al. at col. 32, lines 48-63 describes that web scripts can be sequentially played back by a Vuser executable. There is, however, no mention of any ability to provide adaptive playback of a script.

The additional limitations recited in the independent claims or the dependent claims are not further discussed as the above-discussed limitations are clearly sufficient to distinguish the claimed invention from Weinberg et al. and/or Nesbitt et al. Thus, it is respectfully requested that the Examiner withdraw the rejections under 35 USC § 103(a).

SUMMARY

It is submitted that the rejection of claims 1-5, 23-32 and 34 should be withdrawn. Reconsideration of the application and an early Notice of Allowance are earnestly solicited.

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Amendment is to be charged to Deposit Account No. 50-0388 (Order No. EVLDP001).

Respectfully submitted,
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